

Serial No.: 09/986,983
Atty. Docket No.: P67310US0

IN THE CLAIMS:

Please cancel, amend, retain or add the claims as follows:

1. (Currently Amended) A subcutaneous valve for the treatment of hydrocephalus, said valve having an opening pressure that can be adjusted non-invasively from the outside, the valve comprising a valve body presenting an internal chamber having a cylindrical side wall, an inlet duct and an outlet duct for cerebrospinal fluid, both ducts opening out in the side wall of said chamber and being suitable for connection respectively to a ~~an~~ ventricular catheter and to a drainage catheter for said fluid, a valve member, ~~such as~~ including a ball, mounted on a seat within said chamber at the ~~inside end~~ opening of said inlet duct, a curved spring blade fitting closely against the side wall of said chamber and urging the ball against ~~its~~ said seat, a magnetic moving member movable in rotation about a vertical ~~an~~ axis ~~X-X'~~ under control from outside the valve, and means for locking said moving member in a determined position, ~~the~~ a length of an ~~the~~ active portion of the spring blade acting on the valve member being determined by the position of said moving member, ~~wherein~~ said moving member ~~is~~ constituted by a resilient flexible arcuate blade fitting closely to the cylindrical inside wall of said chamber over at least a fraction of an inside ~~the~~

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circumference thereof, while exerting pressure thereon, said arcuate blade being shaped so as to avoid impeding the flow of fluid through said chamber into the outlet duct.

2. (Currently Amended) A subcutaneous valve according to claim 1, wherein a first end ~~one of the ends~~ of the spring blade is fixed to the cylindrical wall of said chamber, ~~its other~~ a second end thereof being free, and wherein ~~one of the ends~~ a first end of the arcuate blade can slide over ~~the~~ an inside face of said spring blade, bearing thereagainst in order to exert pressure thereon.

3. (Currently Amended) A subcutaneous valve according to claim 1, wherein a first end ~~one of the ends~~ of the spring blade is fixed to a first end ~~one of the ends~~ of the arcuate blade, ~~the other~~ a second end of the spring blade being free.

4. (Original) A subcutaneous valve according to claim 1, wherein the arcuate blade has an opening for allowing the fluid that is inside the internal chamber to pass towards the outlet duct.

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5. (Original) A subcutaneous valve according to claim 1, wherein the spring blade occupies at least one-third of the inside circumference of said chamber.

6. (Currently Amended) A subcutaneous valve according to claim 1, wherein the means for locking the moving member comprise at least two detents suitable for being received in at least two corresponding cavities, said detents being disposed diametrically opposite each other on ~~the~~ an outside face of the arcuate blade and the corresponding cavities being formed in the inside side wall of said chamber, or vice versa.

7. (Currently Amended) A subcutaneous valve according to claim 1, wherein the arcuate blade carries two micromagnets on ~~its~~ an inside face thereof, the micromagnets being fixed to respective ends of the arcuate blade on opposite sides of the vertical axis of rotation, said magnets ~~X-X' and themselves~~ being disposed vertically so ~~that they~~ as to have respective same-sign poles lying in a common plane and facing upwards.

8. (Currently Amended) A subcutaneous valve according to claim 1, wherein the arcuate blade carries two micromagnets on

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~~its~~ an inside face thereof, the micromagnets being fixed to respective ends of the arcuate blade on opposite sides of the vertical axis of rotation, said magnets X-X' ~~and themselves~~ being disposed vertically so ~~that they~~ as to have respective opposite-sign poles lying in a common plane and facing upwards.

9. (Currently Amended) A ~~magnetic device for externally adjusting the~~ subcutaneous valve according to claim 7, ~~the device~~ further comprising a magnetic device for externally adjusting said valve, said device including two magnets embedded in a resin disk and disposed in such a manner that ~~their~~ respective same-sign poles thereof lie in a common plane and face downwards, being of opposite sign to the sign of the poles of the micromagnets of the arcuate blade.

10. (Currently Amended) A ~~magnetic device for externally adjusting the~~ subcutaneous valve according to claim 8, ~~the device~~ further comprising a magnetic device for externally adjusting said valve, said device including two magnets embedded in a resin disk and disposed in such a manner that ~~their~~ respective opposite-sign poles thereof lie in a common plane and face

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downwards, being of opposite signs to the signs of the poles of the micromagnets of the arcuate blade.

11. (Canceled).

12. (New) A subcutaneous valve for the treatment of hydrocephalus, said valve comprising:

a valve body with an internal chamber having a cylindrical side wall, an inlet duct and an outlet duct, both ducts opening out in said side wall;

a valve member mounted on a valve seat in said chamber at the opening of said inlet duct;

a curved spring blade fitting against said side wall of said chamber and having an active portion urging said valve member against said seat;

a resilient flexible arcuate blade fitting against the cylindrical side wall of said chamber over at least a fraction of a circumference thereof while exerting pressure thereon, said arcuate blade being rotatably movable along said circumference, a length of said active portion of said spring blade being determined by a rotated position of said arcuate blade along said circumference;

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a magnetic element fixed to said arcuate blade for effecting said rotating movement from outside said valve; and
a locking element for locking said arcuate blade in a determined position.

13. (New) A subcutaneous valve according to claim 12, wherein a first end of the spring blade is fixed to the cylindrical wall of said chamber and a second end thereof is free, such that a first end of the arcuate blade can slide over an inside face of said spring blade, bearing thereagainst in order to exert pressure thereon.

14. (New) A subcutaneous valve according to claim 12, wherein a first end of the spring blade is fixed to a first end of the arcuate blade, a second end of the spring blade being free.

15. (New) A subcutaneous valve according to claim 12, wherein the arcuate blade has an elongated opening for allowing the fluid that is inside the chamber to pass towards the outlet duct.

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16. (New) A subcutaneous valve according to claim 12, wherein the arcuate blade fits closely to the cylindrical side wall along at least half of said circumference.

17. (New) A subcutaneous valve according to claim 12, wherein the locking element includes at least two detents suitable for being received in at least two corresponding cavities, said detents being disposed diametrically opposite each other on an outside face of the arcuate blade and the corresponding cavities being formed in the cylindrical side wall of said chamber, or vice versa.

18. (New) A subcutaneous valve according to claim 12, wherein said magnetic element includes two micromagnets on an inside face of said arcuate blade, said micromagnets being fixed to respective ends of the arcuate blade on opposite sides of a vertical axis of rotation thereof, said micromagnets being disposed vertically with respective same-sign poles lying in a common plane and facing upwards.

19. (New) A subcutaneous valve according to claim 12, wherein said magnetic element includes two micromagnets on an

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inside face of said arcuate blade, said micromagnets being fixed to respective ends of the arcuate blade on opposite sides of a vertical axis of rotation thereof, said micromagnets being disposed vertically with respective opposite-sign poles lying in a common plane and facing upwards.

20. (New) A subcutaneous valve according to claim 18, further comprising a magnetic device for externally adjusting said valve, said device including two magnets embedded in a resin disk and disposed in such a manner that respective same-sign poles thereof lie in a common plane and face downwards, being of opposite sign to the sign of the poles of the micromagnets of the arcuate blade.

21. (New) A subcutaneous valve according to claim 19, further comprising a magnetic device for externally adjusting said valve, said device including two magnets embedded in a resin disk and disposed in such a manner that respective opposite-sign poles thereof lie in a common plane and face downwards, being of opposite signs to the signs of the poles of the micromagnets of the arcuate blade.